

**Operating guidelines of  
the Technical Committee on Multibody System and Nonlinear Dynamics  
(TC-MSND)  
ASME Design Engineering Division**

**Revision approved on February 28, 2011**

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## Operating guidelines of the TC-MSND

### I. Purpose

The purpose of the Technical Committee on Multibody System and Nonlinear Dynamics (TC-MSND) is to foster experimental, symbolic, computational, and analytical activities pertaining to multibody system and nonlinear dynamics and related technical areas.

This document is a guide to the operation of TC-MSND and its subcommittees. This guide and the official bylaws (see appendix A) constitute the totality of information on the principles and practice underlying the commitments of TC-MSND, its members, and its officers to serve the relevant technical community. This guide is meant to be a living document with regular updates, revisions, and addition of detail and reflections on best practices.

### II. Membership

- §i. TC-MSND membership is attained through election and takes effect on July 1.
- §ii. Members serve at most two consecutive three-year terms with automatic renewal after the first term, unless membership is terminated due to failure to meet reasonable obligations of membership.
- §iii. Election to membership in TC-MSND reflects the recognition of one's peers of potential and likely contributions to TC-MSND related activities, including, but not limited to, subcommittee membership, organization of symposia or other technical or social events at TC-MSND sponsored conferences, attendance at TC-MSND committee meetings, and editorial duties associated with the Journal of Computational and Nonlinear Dynamics.
- §iv. Membership in TC-MSND is a commitment to promote the purpose of TC-MSND and to work actively in its pursuit. It is an opportunity to serve and to sustain the relevant technical community.
- §v. Reasonable obligations of membership include attendance at TC-MSND meetings and participation in TC-MSND votes. Additional undertakings, such as subcommittee membership, are highly encouraged and are suitable ways of establishing a record of service that may support election to office.
- §vi. TC-MSND meetings are held at least twice a year, typically in February/March and August/September. Attendance at meetings includes use of traditional or web-based telephony. One meeting per year is held in conjunction with a TC-MSND sponsored conference.

### III. Officers

- §i. TC-MSND office is attained through election and takes effect on October 1.
- §ii. Officers serve two-year terms and are encouraged to seek higher office upon completion of their term. Officers are discouraged from seeking the same or lower office than the highest office held.
- §iii. Election to office in TC-MSND reflects the recognition of one's peers of past and likely future contributions to TC-MSND related activities, including, but not limited to, organization of TC-MSND sponsored conferences.
- §iv. Holding office in TC-MSND is a commitment to promote the purpose of TC-MSND and to work actively in its pursuit. It is an opportunity to serve and to sustain the relevant technical community. It is an obligation to manage and support the regular responsibilities of TC-MSND.

## Operating guidelines of the TC-MSND

- §v. The office of *recording secretary* typically includes the following responsibilities:
- a. Maintain the TC-MSND membership roster and list of active friends.
  - b. Maintain the TC-MSND attendance and voting participation record.
  - c. Send out meeting agendas and information about means of attendance to the membership at least two weeks prior to a meeting.
  - d. Record and prepare meeting minutes and send these out to the membership at most one month after a meeting.
  - e. Mail meeting agenda and minutes to the DED liaison.
  - f. Maintain copies of TC-MSND bylaws and operating guidelines.
  - g. Chair the TC-MSND Bylaws and Operating Guidelines Committee.
  - h. Serve as technical program chair for the MSNDC conference in the first year following the conclusion of term of office.
  - i. Chair the TC-MSND Conference Coordination Committee.
- §vi. The office of *vice-chairperson* typically includes the following responsibilities:
- a. Maintain lists of TC-MSND subcommittee chairs and membership.
  - b. Liaison with TC-MSND subcommittee chairs on matters to be brought to TC-MSND's attention.
  - c. Maintain a record of TC-MSND financial accounts, including the general account and the Lyapunov and d'Alembert awards accounts.
  - d. Chair TC-MSND meetings in the absence of the chairperson.
  - e. Take on the role of TC-MSND chairperson if the chairperson is unable to complete the term of office.
  - f. Chair the TC-MSND Awards Committee.
- §vii. The office of *chairperson* typically includes the following responsibilities:
- a. Chair TC-MSND meetings.
  - b. Liaison with the DED executive committee and other DED technical committees on matters to be brought to TC-MSND's attention.
  - c. Appoint chairs and members of the Membership Nominating Committee by October 15 of each odd-numbered year.
  - d. Appoint chairs and members of the Officers Nominating Committee by October 15 of each even-numbered year.
  - e. Chair the TC-MSND Honors Committee and appoint additional members.
  - f. Appoint additional members of the TC-MSND Awards and Conference Coordination Committees.
  - g. Serve as conference chair for the MSNDC conference in the first year following the conclusion of term of office.
  - h. Serve as ex-officio voting member for two years following the end of term of office.

## IV. Subcommittees

The committee activities are supported by the efforts of a number of subcommittees. As per the committee bylaws, the TC-MSND chairperson has the authority to establish subcommittees and shall appoint the chairperson of each such subcommittee. This chairperson must be a member of the TC-MSND, except in such special cases where a majority of the members of the TC-MSND vote to accept a non-committee member as subcommittee chairperson. Unless otherwise stated below, the members of the subcommittees need not be members of the TC-MSND. In the case of membership in the subcommittees discussed below, a balance between the technical areas of multibody system dynamics and nonlinear dynamics is preferred.

## Operating guidelines of the TC-MSND

### A. *The Membership Nominating Committee*

- §i. By October 15 of every odd-numbered year, a Membership Nominating Committee, consisting of a chairperson and, at most, two other members, is appointed by the TC-MSND chairperson. The Membership Nominating Committee chairperson must be a member of the TC-MSND, whilst the other members need not be members of the TC-MSND, but must be members of the ASME.
- §ii. In appointing the Membership Nominating Committee, the TC-MSND chairperson is encouraged to seek the involvement of TC-MSND members who are not currently officers, as well as of past members who are not currently eligible for re-election.
- §iii. The responsibility of the Membership Nominating Committee is to present to TC-MSND a list of nominees for election to regular membership. This list and accompanying material shall be sent electronically to the TC-MSND recording secretary and the TC-MSND chairperson by December 15 of the same year for prompt further forwarding to TC-MSND members.
- §iv. Upon submission of the list of nominees, the Membership Nominating Committee is considered defunct.
- §v. The Membership Nominating Committee actively invites nominations, including self-nominations, of interested and qualified members of the relevant technical community (including eligible non-TC-MSND members of the Membership Nominating Committee). Potential nominees include, but are not limited to, authors and symposium organizers from recent TC-MSND sponsored conferences, attendees at recent TC-MSND committee meetings, non-TC-MSND members of TC-MSND subcommittees, members of the editorial board of the *Journal of Computational and Nonlinear Dynamics*, and past TC-MSND members.
- §vi. Nominations that enhance the gender, age, geographical, and ethnic diversity of TC-MSND are particularly encouraged. The Membership Nominating Committee is also encouraged to seek nominations that support a relative balance among the membership between the technical areas of multibody system dynamics and nonlinear dynamics as well as between academia and industry.
- §vii. The number of nominees shall equal or exceed the number of anticipated membership vacancies over the next two-year period. The Membership Nominating Committee does not, however, indicate any preference as to the effective date of membership for a particular nominee.
- §viii. Each nomination should be accompanied by a single-page cover letter and a three-page abbreviated curriculum vitae. The cover letter should emphasize the nominee's contributions to TC-MSND related activities, including, but not limited to, subcommittee membership, organization of symposia or other technical or social events at TC-MSND sponsored conferences, attendance at TC-MSND committee meetings, and editorial duties associated with the *Journal of Computational and Nonlinear Dynamics*. The cover letter may also include a statement as to the preferred effective date of membership, although there is no guarantee that this preference can be accommodated.
- §ix. Members may serve at most two consecutive three-year terms. Membership past the first three-year term shall be assumed to be automatically renewed. Membership may be terminated prematurely, however, in the event that a member fails to meet reasonable obligations of membership. A former member is ineligible for membership for two years following the expiration of a previous term, but may stand for election prior to the expiration of this two-year period.
- §x. The Membership Nominating Committee does not make any evaluative statements regarding nominees, nor does it exclude nominees for any reason other than ineligibility as per the previous paragraph.

## Operating guidelines of the TC-MSND

### ***B. The Officers Nominating Committee***

- §i. By October 15 of every even-numbered year, an Officers Nominating Committee, consisting of a chairperson and, at most, one other member, is appointed by the TC-MSND chairperson. All members of the Officers Nominating Committee must be TC-MSND members.
- §ii. In appointing the Officers Nominating Committee, the TC-MSND chairperson is encouraged to seek the involvement of TC-MSND members who are not currently officers.
- §iii. The responsibility of the Officers Nominating Committee is to present to TC-MSND a list of nominees for election to office. This list and accompanying material shall be sent electronically to the TC-MSND recording secretary and the TC-MSND chairperson by December 15 of the same year for prompt further forwarding to TC-MSND members.
- §iv. Upon submission of the list of nominees, the Officers Nominating Committee is considered defunct.
- §v. The Officers Nominating Committee actively invites nominations, including self-nominations, of interested and qualified TC-MSND members.
- §vi. Nominations that enhance the gender, age, geographical, and ethnic diversity of the TC-MSND officers are particularly encouraged. The Officers Nominating Committee is also encouraged to seek nominations that support a relative balance among the officers between the technical areas of multibody system dynamics and nonlinear dynamics.
- §vii. There shall be at least one nominee per officer position. The current TC-MSND recording secretary is automatically included among the nominees for TC-MSND vice-chair, unless this is explicitly declined. The current TC-MSND vice-chair is automatically included among the nominees for TC-MSND chair, unless this is explicitly declined.
- §viii. Each nomination shall be accompanied by a single-page cover letter and an abbreviated curriculum vitae. The cover letter should emphasize the nominee's contributions to TC-MSND related activities, including, but not limited to, current officer responsibilities, subcommittee membership, organization of symposia or other technical or social events at TC-MSND sponsored conferences, attendance at TC-MSND committee meetings, and editorial duties associated with the Journal of Computational and Nonlinear Dynamics.
- §ix. Each officer serves a single two-year term. Past officers are discouraged from seeking the same or lower positions of office than the highest office held.
- §i. The Officers Nominating Committee does not make any evaluative statements regarding nominees, nor does it exclude nominees for any reason.

### ***C. The Honors Committee***

- §i. The Honors Committee is typically chaired by the TC-MSND chairperson and consists of at least one other member who has attained the rank of Fellow of the ASME, but who need not be a TC-MSND member.
- §ii. The Honors Committee actively invites nominations, including self-nominations, of qualified members of the relevant technical community for nomination to Fellow of the ASME. Potential nominees include, but are not limited to, current and past TC-MSND members or members of its subcommittees.
- §iii. The Honors Committee presents a report on potential nominees to Fellow of the ASME to TC-MSND at its regular meetings and identifies possible sponsors.
- §iv. In the event that TC-MSND supports pursuit of a formal nomination for Fellow of the ASME, the Honors Committee may work with a sponsor to prepare a competitive nominations package.
- §v. The Honors Committee also informs the members and friends of nomination deadlines for suitable ASME Awards and encourages the nomination of eligible individuals.

## Operating guidelines of the TC-MSND

### *D. The Awards Committee*

- §i. The Awards Committee is typically chaired by the TC-MSND vice-chairperson and consists of at least one other TC-MSND member.
- §ii. The responsibility of the Awards Committee is to invite nominations of highly distinguished members of the relevant technical community for the d'Alembert and Lyapunov awards through advertisement (see sample call in Appendix B) during the period January-June of each even-numbered year in relevant technical journals including, but not limited to,
  - a. ASME Journal of Vibration and Acoustics,
  - b. ASME Journal of Applied Mechanics,
  - c. ASME Journal of Mechanical Design,
  - d. ASME Journal of Computational and Nonlinear Dynamics,
  - e. Journal of Sound and Vibration,
  - f. Journal of Vibration and Control,
  - g. Nonlinear Dynamics,
  - h. International Journal of Non-Linear Mechanics,
  - i. Mechanics Based Design of Structures and Machines,
  - j. Multibody System Dynamics,
  - k. IMechE Journal of Multibody Dynamics,
  - l. Chaos, Solitons & Fractals
  - m. International Journal of Bifurcation and Chaos
  - n. Journal of Guidance, Control and Dynamics
  - o. Computer Methods in Applied Mechanics and Engineering
- §i. Nominations must include a nomination letter, signed or co-signed by a TC-MSND member, describing the technical field and impact of the nominee; a complete curriculum vitae; and up to five letters of support. Nomination packages should be submitted as .pdf files.
- §ii. The Awards Committee presents the complete nomination packages to TC-MSND at least two weeks prior to the even-numbered-year fall TC-MSND meeting.
- §iii. Discussion of the relative credentials/merits of the nominees for the d'Alembert and Lyapunov awards takes place at the even-numbered-year fall TC-MSND meeting.
- §iv. In the event of at least two nominees for an award, a vote by confidential electronic ballots for the winner of the award is held within two weeks of this meeting with the assistance of an independent third party. Each TC-MSND member is allowed one vote for each of the awards. In the event of a tie, a run-off vote is held within one week. The TC-MSND recording secretary is informed of the outcome of the votes as well as the voting participation of the members.
- §v. The DED Executive Committee must ratify the selection for recipients of the d'Alembert and Lyapunov awards. To ensure close communication with the DED Executive Committee on this matter, the DED Honors Committee chair may be invited to attend the TC-MSND meeting at which the selection is discussed. The DED Honors Committee chair must further be notified of the final selection and confirmation from the DED must be received prior to notifying the awardees.
- §vi. It is the responsibility of the Awards Committee to send letters to all nominators informing them of the outcome of the TC-MSND vote.
- §vii. The Awards Committee should follow up with the TC-MSND chairperson to ensure that the awardees are informed of their selection. It is expected that awardees will attend the odd-numbered-year TC-MSND sponsored conference and that, in addition to the monetary award, their registration fee will be waived.

## Operating guidelines of the TC-MSND

- §viii. It is the responsibility of the Awards Committee to follow up with the DED Honors Committee chair to ensure that the ASME Technical Affairs Staff Member is duly notified and instructed to prepare plaques to be presented to the awardees at the odd-numbered-year TC-MSND sponsored conference.
- §ix. It is the responsibility of the Awards committee to maintain a record of past Lyapunov and d'Alembert awardees as well as to provide the Publicity and Information Committee with relevant technical material, for example .pdf versions of the awardees' presentations.

### ***E. The Conference Coordination Committee***

- §i. The Conference Coordination Committee is typically chaired by the TC-MSND recording secretary and consists of at least one other TC-MSND member.
- §ii. It is the responsibility of the Conference Coordination Committee to present to the committee a list of proposed symposium titles for the odd-year MSNDC conference at least twelve months prior to the conference.
- §iii. The Conference Coordination Committee is encouraged to include with this list a record of similar symposia held at previous conferences, including information about organizers, numbers of papers submitted, number of papers accepted, and number of papers presented.
- §iv. In preparing the list, the Conference Coordination Committee is encouraged to consider maintaining a relative balance between the technical areas of multibody system dynamics and nonlinear dynamics, to reduce apparent technical overlap between symposia, and to consider the inclusion of symposia with more immediate industrial or applied technology appeal.
- §v. A vote of TC-MSND is held within a month of receipt of the list of proposed symposium titles. The vote considers the motion that the list be approved as-is and is considered binding on the conference program chair provided that symposium organizers can be found. Amendments to the list of proposed symposium titles are allowed but must be approved by vote on a case-by-case basis.

### ***F. The Paper Competition Committee***

- §i. The Paper Competition Committee is chaired by a TC-MSND member and consists of at least three additional members, who need not be TC-MSND members.
- §ii. It is the responsibility of the Paper Competition Committee to organize a Student Paper Competition in conjunction with the odd-year MSNDC conference and to advertise this broadly (see Appendix C for a sample call).
- §iii. Provided that there are at least four submissions to the competition, it is the responsibility of the Paper Competition Committee to arrange for the selection, from among the submissions, a single or, in the case of a tie, multiple winners of the MSNDC Best Student Paper Award, each of whom shall receive the full prize amount. A suggested protocol for this selection process is included in appendix D.
- §iv. A paper is eligible for the Student Paper Competition provided that its lead author at the time of submission is a student; that this individual is the presenting author; that there are no more than three authors; that the student is only submitting a single paper for consideration; that the student's advisor appears on at most two papers being considered for the competition; and that none of the authors is a member of the Paper Competition Committee.

### ***G. The Bylaws and Operating Guidelines Committee***

- §i. The Bylaws and Operating Guidelines Committee is typically chaired by the TC-MSND recording secretary and consists of at least two other TC-MSND members.

## **Operating guidelines of the TC-MSND**

- §ii. It is the responsibility of the Bylaws and Operating Guidelines Committee to regularly revisit the TC-MSND bylaws and operating guidelines document to ensure that these accurately reflect TC-MSND practice.
- §iii. In the event that revisions to the TC-MSND bylaws appear called for due to discrepancies between these and accepted practice, the Bylaws and Operating Guidelines Committee brings this to TC-MSND's attention. Changes to the bylaws require approval by two-thirds of TC-MSND members.
- §iv. In the event that revisions to the TC-MSND operating guidelines document appear called for, the Bylaws and Operating Guidelines Committee brings this to TC-MSND's attention. The operating guidelines document is meant to be a living document. No formal approval is necessary for proposed changes.

### ***H. The Publicity and Information Committee***

- §i. The Publicity and Information Committee consists of at least two TC-MSND members.
- §ii. It is the responsibility of the Publicity and Information Committee to maintain the TC-MSND website and to work to publicize the efforts of TC-MSND in support of the relevant technical community.

## **V. Conferences**

The committee is a direct sponsor or co-sponsor of two regularly occurring international conferences as discussed below. In addition, the committee provides sponsorship to other international conferences, such as the International Multibody System Dynamics conference (IMSD).

### ***A. MSNDC***

- §i. TC-MSND sponsors the International Conference on Multibody Systems, Nonlinear Dynamics, and Control (MSNDC) held every odd-numbered year in conjunction with the International Design Engineering Technical Conferences (IDETC) meeting.
- §ii. The MSNDC organizers consist of a Conference Chair, a Program Chair, and a Paper Competition Chair. The Conference Chair position is held by the TC-MSND chairperson whose term expires June 30 that same year. The Program Chair position is held by the TC-MSND recording secretary whose term expires June 30 that same year. The Paper Competition Chair is held by the chair of the Paper Competition Committee.
- §iii. It is the responsibility of the Conference Chair and the Program Chair to work closely with the General Conference Chair(s) and General Technical Program Chair(s) in all matters related to the organization of the MSNDC including, but not limited to, regular attendance at IDETC organizing committee meetings and prompt delivery of introductory material for the IDETC proceedings.
- §iv. It is the responsibility of the Paper Competition Chair to ensure that printed or web-based calls for papers to the MSNDC include a call for submissions to the student-paper competition (see appendix C for a sample call); that the electronic submission system supports self-nomination of a paper for the competition at the time of submission; that a session in the program is set aside for the student-paper competition oral presentations; and that the winner(s) of the MSNDC Best Student Paper Award be recognized at the MSNDC luncheon in conjunction with the winners of the d'Alembert and Lyapunov awards.

## **Operating guidelines of the TC-MSND**

### ***B. DFD***

- §i. TC-MSND co-sponsors with TCVS the Biennial International Conference on Dynamics for Design (DFD) held every even-numbered year at the IDETC meeting and contributes members to its organizing committee.

## Appendix A TC-MSND Bylaws, Revised February 28, 2011

### Purpose

The purpose of the Technical Committee on Multibody Systems and Nonlinear Dynamics (TC-MSND) is to foster experimental, symbolic, computational, and analytical activities pertaining to multibody systems and nonlinear dynamics and related technical areas.

### Membership and Terms of Service

1. A full committee shall nominally consist of twenty regular members. Under special circumstances, the number of members can be expanded to more than twenty through voting of the TC-MSND.
2. A member may serve no more than two consecutive three-year terms and is ineligible for membership within two years after expiration of the final term.
3. If a member misses three consecutive TC-MSND meetings the membership is terminated unless extenuating circumstances are presented to the committee and the committee approves continuation of the membership by a majority vote.
4. The committee chairperson shall be an ex-officio member of the committee, with vote, for two years after completing that term of office.
5. Officers shall serve a complete two-year term of office as voting members of the committee even if such service extends beyond the end of their normal term of committee membership. If a portion of the term, to which an officer was elected as a committee member, remains at the completion of the term of office, it shall be finished as a regular committee member.

### Election of New Members

1. By October 15 of every odd-numbered year, the committee chairperson shall appoint a Nominating Committee consisting of a chairperson and, at most, two other members. The Nominating Committee chairperson shall be a member of the TC-MSND; the other members need not be members of the TC-MSND, but must be members of the ASME.
2. The Nominating Committee shall consider potential new members and present a list of nominees to the chairperson by December 15 of the same year. This list shall consist of at least as many nominees as the number of anticipated TC-MSND vacancies for the next two-year period.
3. Election of new members shall be held by electronic ballot by February 15 of each even-numbered year. Each member of the TC-MSND, except the chairperson, shall have one vote for each anticipated membership vacancy.
4. In descending order of number of votes and commensurate with the number of anticipated vacancies, nominees shall be considered elected and members of the TC-MSND effective July 1 of the same year or effective July 1 of the following year. The chairperson shall cast a tie-breaking vote, in case of any tie.

## **Operating guidelines of the TC-MSND**

### **Officers**

1. The committee shall be governed by three officers: a chairperson, vice-chairperson, and recording secretary.
2. The term of office for each officer shall be two years, extending from October 1 of an odd-numbered year until the end of September two years later.
3. For officers whose term began on July 1, 2009, their term shall expire on September 30, 2011, at which time this clause will be deleted from the by-laws.
4. By October 15 of every even-numbered year, the chairperson shall appoint a Nominating Committee consisting of a chairperson and, at most, one other member, both of which shall be members of the TC-MSND.
5. The Nominating Committee shall consider potential officers from among the committee members and present a list of nominees to the chairperson by December 15 of the same year. Election of officers shall be held by electronic ballot by February 15 of each odd-numbered year. Each member of the TC-MSND shall have one vote for each officer.
6. Election shall be accomplished by plurality of the votes cast.
7. If the TC-MSND chairperson cannot complete the term of office, then the vice-chairperson shall become chairperson. If the recording secretary cannot complete the term of office, the chairperson shall appoint a new recording secretary from the TC-MSND membership to serve the remainder of the term of office.
8. A sitting recording secretary or vice-chairperson may stand for election to a higher office even if their current membership term has expired.

### **Subcommittees**

1. The chairperson of the TC-MSND has the authority to establish subcommittees, and shall appoint the chairperson of each such subcommittee.
2. The members of the subcommittees need not be members of the TC-MSND. The chairperson of each subcommittee must be a member of the TC-MSND, except in such special cases where a majority of the members of the TC-MSND vote to accept a non-committee member as subcommittee chairperson.

### **Ratification and Amendments**

1. These rules become effective upon ratification.
2. Amendments to these rules require two-third vote of all regular members of the TC-MSND.

## Operating guidelines of the TC-MSND

### Appendix B Sample call for the d'Alembert and Lyapunov awards

The Technical Committee on Multibody Systems and Nonlinear Dynamics (TC-MSND) of the ASME Design Engineering Division solicits nominations for the d'Alembert Award and the Lyapunov Award. These awards will be presented at the 7th ASME International Conference on Multibody Systems, Nonlinear Dynamics and Control, as part of the ASME 2009 International Design Engineering Technical Conferences to be held in San Diego, California, August 30 – September 2, 2009.

The **d'ALEMBERT AWARD**, established in 2005, recognizes lifelong contributions to the field of multibody system dynamics.

The **LYAPUNOV AWARD**, established in 2005, recognizes lifelong contributions to the field of nonlinear dynamics.

**Selection criteria and nomination materials:** These awards recognize lifelong impact of research contributions, education and training of researchers and/or practitioners, and overall leadership in advancing the field. Nominations should include 1) a nomination letter describing the field of, and the impact of the nominee, 2) a curriculum vitae, and 3) up to five letters of support. All nomination materials must be submitted in electronic (.pdf) format.

**Submission instructions:** Submit nomination materials before August 1, 2008 to the Chair of the Awards Committee:

Professor Eric Butcher  
Chair TC-MSND Awards Committee  
Department of Mechanical and Aerospace Engineering  
New Mexico State University  
Las Cruces, NM 88003-8001  
USA  
Email: [eab@nmsu.edu](mailto:eab@nmsu.edu)  
Tel: +1-575-646-6179

### Appendix C

## Operating guidelines of the TC-MSND

### Sample call for MSNDC Student Paper Competition

The Technical Committee on Multibody Systems and Nonlinear Dynamics (TC-MSND) of the ASME Design Engineering Division solicits submissions to the 2011 MSNDC Student Paper Competition to be held in conjunction with the 8th ASME International Conference on Multibody Systems, Nonlinear Dynamics and Control (MSNDC), as part of the ASME 2011 International Design Engineering Technical Conferences (IDETC) in Washington, D.C., August 28 – 31, 2011.

The **MSNDC Best Student Paper Award** recognizes a student who has authored a paper included in the MSNDC proceedings and given an oral presentation at the MSNDC which achieve a high degree of originality, technical content and quality, relevance and contribution, and organization and clarity.

**Eligibility:** A paper is eligible for the MSNDC Student Paper Competition provided that its lead author at the time of submission is a student; that this individual is the presenting author; that there are no more than three authors; that the student is only submitting a single paper for consideration; that the student's advisor appears on at most two papers being considered for the competition; and that none of the authors is a member of the TC-MSND Paper Competition Committee.

**Submission instructions:** Manuscripts intended to be considered for the MSNDC Best Student Paper Award shall be submitted to the regular MSNDC technical symposia through the IDETC webpage and must be expressly declared as intended for the competition by the authors at the time of submission. The deadline for submitting manuscript intended to be considered for the MSNDC Best Student Paper Award is that of the corresponding technical symposium.

**Evaluation process:** If a manuscript is selected among the finalists for the MSNDC Best Student Paper Award, the student who is the first author shall give an oral presentation on its content in a special MSNDC Student Paper Competition session on the first day of the MSNDC as well as in the corresponding technical symposium.

Questions regarding the MSNDC Student Paper Competition should be directed to the MSNDC Paper Competition Chair:

Prof. Tamás Kalmár-Nagy  
Chair TC-MSND Paper Competition Committee  
Dept. of Aerospace Engineering  
Texas A&M University  
College Station, TX 77843-3141, USA  
Email: kalmarnagy@aero.tamu.edu  
Tel: +1-979-8623323

### Appendix D

## Operating guidelines of the TC-MSND

### Selection process for MSNDC Student Paper Competition

- §i. Each paper submitted to the Student Paper Competition shall be reviewed by at least three reviewers, each of whom shall complete a scoring sheet (below), as part of the regular review process handled by the review coordinators for the technical symposium to which the paper was submitted.
- §ii. The top scoring papers, no fewer than four and not exceeding eight in number, shall undergo a second stage of review and scoring, by a different and independent set of reviewers, preferably members of the Paper Competition Committee. The four papers with the highest aggregate score, giving 60% weight to the second stage scores, will be selected as finalists for oral presentations in the Student Paper Competition session.
- §iii. The Student Paper Competition session shall be held on the first day of the MSNDC and chaired by a member of the Paper Competition Committee.
- §iv. One month prior to the MSNDC, the finalists will be provided the scoring scheme for the oral presentations (below). A panel of four judges, with appropriate technical background, shall score the oral presentations as per the scoring scheme.
- §v. The winner of the MSNDC Best Student Paper Award shall be the recipient of the highest aggregate score, obtained by adding the average score from the judges of the oral presentation to the average score from the manuscript review. These scores shall be kept confidential.
- §vi. In the event of a tie, the winner shall be the recipient of the highest average score from the judges of the oral presentation. If this fails to distinguish between the top scorers, multiple winners shall be declared.

### Manuscript scoring criteria:

Each manuscript shall be evaluated according to the following criteria, scores, and weights.

- Originality: score=1-10, weight=1.5.
- Technical content and quality: score=1-10, weight=2.5.
- Relevance and contribution: score=1-10, weight=1.
- Organization and clarity: score=1-10, weight=1.

### Oral presentation scoring criteria:

Each oral presentation shall be evaluated according to the following criteria and scores.

- Introduction: score=1-15
  - The research question/hypothesis was clearly stated.
  - The goals and specific objectives were presented.
  - The project had sufficient, supporting background.
- Methods and results: score=1-15
  - The methods were clearly outlined/explained.
  - The presenter acknowledged limitations of the study.
  - The results were clearly explained/highlighted.
- Conclusions: score=1-15
  - A review/summary of the project was presented.

### **Operating guidelines of the TC-MSND**

- The significance of the results was discussed.
  - The applicability of the results was discussed.
- Presentation style: score=1-15
  - Presentation was clear, readable, well-structured, and logical.
  - The presentation fit into the allotted time.
  - The student seemed knowledgeable, exhibited good voice projection and confidence, and responded well to questions from the audience.